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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/683,941

03/05/2002

Syun Kyung Lee

201-0148 FGM

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7590

05/26/2006

MACMILLAN, SOBANSKI & TODD, LLC
ONE MARITIME PLAZA - FIFTH FLOOR
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TOLEDO, OH 43604

EXAMINER

LUM VANNUCCI, LEE SIN YEE

ART UNIT

PAPER NUMBER

3611

DATE MAILED: 05/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/683,941

Applicant(s)

LEE ET AL.

Examiner

Ms. Lee S. Lum

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 38-45 is/are allowed.
- 6) ☒ Claim(s) 47-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. An Amendment was filed 3/29/06 in which Claim 46 was also cancelled. The Claims remaining are 38-45 and 47-53.

Upon reconsideration, Examiner has provided a new rejection below, and sincerely apologizes for the inconvenience.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 47-50 are rejected under 35 U.S.C. 102(e) as being anticipated by Kouno 5947224.

Kouno discloses a four-wheel drive assembly (c1, ln 9-10) comprising

Torque transfer assembly 4, including controller 50, with a pre-emptive slip control mode (at least fig 4),

in which torque is increased (c10, ln 63-65) to the slower pair of wheels after determining that a slip condition is likely to occur on the basis of vehicle speed (step S1; where vehicle speed is substantially equal to wheel speed), and throttle position (step S3), and,

the assembly ceasing the torque increase upon an occurrence of a predetermined condition, such as vehicle speed (approx. 25 km/hr), and difference in wheel speeds (c3, ln 24-36), and,

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the controller sensing the wheels being on a surface with a low coefficient of friction (c10, ln 57-58), and, Increasing torque to a slower pair of wheels (c10, ln 63-65) upon a sensed slip condition after the presence of the surface is sensed.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kouno.

Re **Claim 51**, the reference does not specify the difference in wheel speeds as a certain value, but this specification is application-dependent, and specificity is immaterial to the intended, and proper operation of the invention.

Re **Claims 52 and 53**, the reference further discloses the pre-emptive mode as being terminated after a period of time, as depicted in fig 4 as a portion of an algorithm/software that is repeated indefinitely in the controller (as is inherent). While the time period is not specified, this specificity is application-dependent, and immaterial to the proper operation of the invention.

4. **Claims 38-45 are allowable.**

Prior art does not disclose a four-wheel drive assembly for a vehicle having two pairs of wheels comprising, *inter alia*, a preemptive mode which occurs only after the occurrence of a first mode, the preemptive mode increasing torque to a slower pair of wheels after determining that a slip condition is likely to occur on the basis of the vehicle speed, and a position of either the accelerator or throttle plate.

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5. RESPONSE TO REMARKS

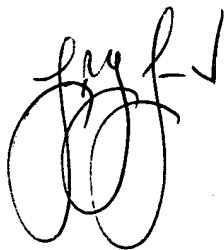
Examiner provides new rejections for Claims 47-53, employing Kouno to obviate the recited elements, and *sincerely apologizes for the inconvenience*. Claim 47 has been reconsidered to recite a combination of functions, as provided in the rejections. The claim is dissimilar to (allowable) Claim 38, which recites the *conditional* "a preemptive mode which occurs only after the first mode has occurred" (emphasis added).

6. Communication with the Examiner and USPTO

Any inquiry concerning this communication, or others, should be directed to Ms. Lum at 571 272-6649, M-F, 9-5. If attempts to reach the examiner are unsuccessful, her supervisor, Ms. Lesley Morris is at 571 272-6651. Our fax number is 571 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for unpublished applications: private PAIR only, for published applications: private or public PAIR. For more information re PAIR: <http://pair-direct.uspto.gov>. Questions re private PAIR: contact the Electronic Business Center (EBC) at 866 217-9197.

Ms. Lee S. Lum
Examiner
5/24/06

A handwritten signature in black ink, appearing to read 'Lum', with a large, stylized circular flourish below it.